What is claimed is:

1. An organozirconium composite comprising one, or at least two kinds of zirconium chelate complexes comprising, as a ligand, both of a first β diketone and a second β diketone having a structure different from that of the first β diketone, wherein

when the organozirconium composite comprises at least two kinds of zirconium chelate complexes, the coordination numbers of the first β diketone and the second β diketone that coordinate to at least two kinds of zirconium chelate complexes vary depending on the respective zirconium chelate complexes.

2. The organozirconium composite according to claim 1, further comprising at least one of a first β diketone ligand and a second β diketone ligand.

3. The organozirconium composite according to claim 1, further comprising at least one of a zirconium chelate complex containing only the first β diketone as a ligand and a zirconium chelate complex containing only the second β diketone as a ligand.

4. The organozirconium composite according to claim 1, wherein the first β diketone and the second β diketone are compounds selected from the group consisting of 2,2,6,6-tetramethyl-3,5-heptanedione residue, 2,6-dimethyl-3,5-heptanedione residue, acetylacetone residue, hexafluoroacetylacetone residue, trifluoroacetylacetone residue, trimethyloctanedione residue and diphenylpropanedione residue.

5. The organozirconium composite according to claim 1, wherein the zirconium chelate complex is obtained by reacting at least two kinds of β diketone compounds with a zirconium compound.

6. The organozirconium composite according to claim 5, wherein the zirconium chelate complex is a complex obtained by reacting at least two kinds of β diketone compounds with a zirconium compound, wherein

a mixing ratio of two kinds of β diketone compounds, that is, a mixing ratio of one β diketone compound A with the other β diketone compound B, (A/B), is from 80/20 to 20/80 in terms of molar ratio.

7. The organozirconium composite according to claim 5, wherein at least two kinds of β diketone compounds are compounds selected from the group consisting of 2,6-dimethyl-3,5-heptanedione, 2,2,6,6-tetramethyl-3,5-heptanedione, acetylacetone, hexafluoroacetylacetone, trifluoroacetylacetone, trimethyloctanedione and diphenylpropanedione.

8. The organozirconium composite according to claim 5, wherein one β diketone compound is 2,6-dimethyl-3,5-heptanedione and the other β diketone compound is 2,2,6,6-tetramethyl-3,5-heptanedione.

9. A method of synthesizing an organozirconium composite, which comprises mixing a first β diketone compound with a zirconium chelate complex containing, as a ligand, a second β diketone having a structure different from that of the first β diketone compound.

10. The method of synthesizing an organozirconium composite according to claim 9, wherein the amount of the first β diketone compound is within a range from 100 to 1600 mol% based on the zirconium chelate complex containing the second β diketone as a

ligand.

11. The method of synthesizing an organozirconium composite according to claim 9, wherein the first β diketone compound is 2,2,6,6-tetramethyl-3,5-heptanedione and the zirconium chelate complex containing the second β diketone as a ligand is tetrakis-2,6-dimethyl-3,5-heptanedionate zirconium.

12. The method of synthesizing an organozirconium composite according to claim 9, wherein the first β diketone compound is 2,6-dimethyl-3,5-heptanedione and the zirconium chelate complex containing the second β diketone as a ligand is tetrakis-2,2,6,6-tetramethyl-3,5-heptanedionate zirconium.

13. A method of synthesizing an organozirconium composite, which comprises dissolving a zirconium compound selected from zirconium butoxide, zirconium chloride and zirconium chloride oxide in an organic solvent, adding a mixed solution containing at least two kinds of β diketone compounds to the resulting solution, and heating the mixed solution under reflux at a temperature higher than a boiling point of the organic solvent contained in the mixed solution.

14. The method of synthesizing an organozirconium composite according to claim 13, comprising reacting two kinds of β diketone compounds with a zirconium compound, wherein

a mixing ratio of two kinds of β diketone compounds, that is, a mixing ratio of one β diketone compound A with the other β diketone compound B, (A/B), is from 80/20 to 20/80 in terms of molar ratio.

15. The method of synthesizing an organozirconium composite according to claim 13, wherein at least two kinds of β diketone compounds are compounds selected from the group consisting of 2,6-dimethyl-3,5-heptanedione, 2,2,6,6-tetramethyl-3,5-heptanedione, acetylacetone, hexafluoroacetylacetone, trifluoroacetylacetone, trimethyloctanedione and diphenylpropanedione.

16. The method of synthesizing an organozirconium composite according to claim 13, wherein one β diketone compound is 2,6-dimethyl-3,5-heptanedione and the other β diketone compound is 2,2,6,6-tetramethyl-3,5-heptanedione.

17. A raw material solution comprising an organic solvent and an organozirconium composite of any one of claims 1 dissolved in the organic solvent.

18. A raw material solution comprising an organic solvent and an organozirconium composite obtained by the synthesis method of claim 9 dissolved in the organic solvent.

19. A raw material solution containing an organozirconium composite, comprising an organic solvent, and a first zirconium chelate complex in which a single kind of a β diketone compound is coordinated to a center metal and a second zirconium chelate complex in which a single kind of a β diketone compound different from the β diketone compound is coordinated to a center metal, which are dissolved in an organic solvent.

20. The raw material solution according to claim 19, wherein a mixing ratio of first and second zirconium chelate complexes, that is, a mixing ratio of a first zirconium chelate complex C_1 with a second zirconium chelate complex C_2, (C_1/C_2), is from 10/90 to 90/10 in terms of molar ratio.

21. The raw material solution according to claim 19, wherein the first and second zirconium chelate complexes are complexes selected from the group consisting of tetrakis-2,6-dimethyl-3,5-heptanedionate zirconium, tetrakis-2,2,6,6-tetramethyl-3,5-heptanedionate zirconium, tetrakisacetylacetonate zirconium, tetrakishexafluoroacetylacetonate zirconium, tetrakistrifluoroacetylacetonate zirconium, tetrakistrimethyloctanedionate zirconium and tetrakisdiphenylpropanedionate zirconium.

22. The raw material solution according to claim 19, wherein the first zirconium chelate complex is tetrakis-2,2,6,6-tetramethyl-3,5-heptanedionate zirconium and the second zirconium chelate complex is tetrakis-2,6-dimethyl-3,5-heptanedionate zirconium.

23. The raw material solution according to claim 17, wherein the organic solvent comprises one, or at least two kinds of solvents selected from the group consisting of tetrahydrofuran, methyltetrahydrofuran, n-octane, iso-octane, hexane, cyclohexane, pyridine, lutidine, butyl acetate and amyl acetate.

24. The raw material solution according to claim 18, wherein the organic solvent comprises one, or at least two kinds of solvents selected from the group consisting of tetrahydrofuran, methyltetrahydrofuran, n-octane, iso-octane, hexane, cyclohexane, pyridine, lutidine, butyl acetate and amyl acetate.

25. The raw material solution according to claim 19, wherein the organic solvent comprises one, or at least two kinds of solvents selected from the group consisting of tetrahydrofuran, methyltetrahydrofuran, n-octane, iso-octane, hexane, cyclohexane, pyridine, lutidine, butyl acetate and amyl acetate.

26. The raw material solution according to claim 17, further comprising at least one of an organolead compound and an organotitanium compound.

27. The raw material solution according to claim 18, further comprising at least one of an organolead compound and an organotitanium compound.

28. The raw material solution according to claim 19, further comprising at least one of an organolead compound and an organotitanium compound.

29. A method of forming a lead zirconate titanate thin film, which comprises forming the film using the organozirconium composite of claim 1.

30. A method of forming a lead zirconate titanate thin film, which comprises forming the film using the organozirconium composite obtained by the synthesis method of claim 9.

31. A method of forming a lead zirconate titanate thin film, which comprises forming the film using the organozirconium composite obtained by the synthesis method of claim 13.

32. A method of forming a lead zirconate titanate thin film, which comprises forming the film using the raw material solution of claim 17.

33. A method of forming a lead zirconate titanate thin film, which comprises forming the film using the raw material solution of claim 18.

34. A method of forming a lead zirconate titanate thin film, which comprises forming

the film using the raw material solution of claim 19.